

Notice of Allowability**Application No.**

10/567,418

Examiner

MUHAMMAD N. EDUN

Applicant(s)

HASHIMOTO, KIYOKAZU

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment file on 02/06/06.
2. ☒ The allowed claim(s) is/are 1, 3, 6, 4, 5, 7, 9, 8, 20, 10, 2, 11-13, 16, 14, 15, 17, 19, 18, 21 and 22 (1-22 respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Prior Art Citation

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jimura et al. (2003/0165095), Miyagawa et al. (6,744,706) and Yamamoto et al. (2002/0176340), all disclose an optical disk apparatus having the ability of detecting wobble information from the optical disk to be processed by the optical disk apparatus.

Reasons For Allowance

The following is an Examiner's Statement of Reasons for Allowance:

Re claims 1, 3-10 and 20

The prior art of record alone or in combination does not teach or suggest the optical disk apparatus having the combination of element with their recited function, along with having:

a wobble detection balance adjustment circuit for receiving the first detection signal and the second detection signal, making an adjustment so that a signal level of the first detection signal is equal to a signal level of the second detection signal, and outputting the respective detection signals;

a wobble detection differential circuit for generating a wobble detection differential signal indicating a difference between the first detection signal and the second detection signal whose signal levels have been adjusted by the wobble detecting balance adjustment circuit;

an analog-to-digital conversion circuit for digitizing the wobble detection differential signal generated by the wobble detection differential circuit;

a wobble signal detection circuit for detecting a wobble signal based on the wobble detection differential signal digitized by the analog-to-digital conversion circuit;

an adder circuit for generating a sum signal indicating a sum of the first detection signal and the second detection signal whose signal levels have been adjusted by the wobble detection balance adjustment circuit;

a binarization circuit for comparing the sum signal generated by the adder circuit with a predetermined level of signal, and converting the sum signal into a binarized signal;

a latch circuit for latching the output signal from the binarization circuit with a conversion clock of the analog-to-digital conversion circuit or a clock with a frequency that is an integral multiple of a frequency of the conversion clock, and converting the output signal into a recording timing signal;

a control signal generation circuit for generating a control signal for removing a residual signal component as a residual component of a recording signal included in the digitized wobble detection differential signal, based on the recording timing signal output from the latch circuit and the digitized wobble detection differential signal;

a residual component removal circuit for removing the residual signal component included in the digitized wobble detection difference signal based on the control signal supplied from the control signal generation circuit, so as to extract a land pre-pit detection signal; and

an address detection circuit for detecting the address information based on the land pre-pit detection signal output from the residual component removal circuit,

as set forth in claims 1, 3-10 and 20.

Re claims 2, 11-19, 21 and 22

The prior art of record alone or in combination does not teach or suggest the optical disk apparatus having the combination of elements with their recited functions, along with having:

a wobble detection balance adjustment circuit for receiving the first detection signal and the second detection signal, making an adjustment so that a signal level of the first detection signal is equal to a signal level of the second detection signal, and outputting the respective detection signals;

a wobble detection differential circuit for generating a wobble detection differential signal indicating a difference between the first detection signal and the second detection signal whose signal levels have been adjusted by the wobble detection balance adjustment circuit;

an analog-to-digital conversion circuit for digitizing the wobble detection differential signal generated by the wobble detection differential circuit;

a wobble signal detection circuit for detecting a wobble signal based on the wobble detection differential signal digitized by the analog-to-digital conversion circuit;

a control signal generation circuit for generating a control signal for removing a residual signal component as a residual component of a recording signal included in the digitized wobble detection differential signal based on a recording timing signal obtained based on at least one of the output signals from the recording signal generation circuit and the reproduction signal generation circuit and the wobble detection differential signal;

a residual component removal circuit for removing the residual signal component included in the digitized wobble detection difference signal based on the control signal supplied from the control signal generation circuit, so as to extract a land pre-pit detection signal; and

an address detection circuit for detecting the address information based on the land pre-pit detection signal output from the residual component removal circuit,

as set forth in claims 2, 11-19, 21 and 22.


Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the

Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MUHAMMAD N. EDUN whose telephone number is 571-272-7617. The examiner can normally be reached on FLEXTIME.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MUHAMMAD N EDUN
Primary Examiner
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